

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 – 7. (Cancelled)

8. (Currently Amended) A computer-implemented method for using a computer system to configure a simulation program executable by a computer processor for computing amounts of heat exchanged according to claim 7, comprising the steps of: A computer-implemented method for using a computer system to configure a simulation program executable by a computer processor for computing amounts of heat exchanged, comprising the steps of:

defining a compressor class, tube class, and heat exchanger class as categories among which models that represent phenomena occurring in a refrigeration system for producing refrigeration effect by means of heat exchange between refrigerant and air are independent of one another;

defining an abstract class by extracting characteristics common to a plurality of similar parts contained in each class if such parts exist;

providing, under the abstract class, as many subclasses which inherit character of the abstract class as there are necessary types of parts to be distinguished;

implementing a phenomenological model of each defined class;

creating a computer-implemented simulation program executable by the computer processor in an object-oriented language based on the classes;

composing the heat exchanger class by combining individual cells in a cell class;

combining a tube class and fin class into the cell class as categories among which models

that represent phenomena occurring in the cells are independent of one another;
defining a refrigerant class for a working fluid which interacts with the tube class;
defining an air class for a working fluid which interacts with the fin class;
defining an abstract class by extracting characteristics common to a plurality of similar parts contained in each of the tube class and fin class if such parts exists;
defining, under each abstract class, as many subclasses which inherit characteristics of the abstract class as there are necessary types of parts to be distinguished;
implementing a phenomenological model of each defined class; and
creating a simulation program in an object-oriented language based on the classes.

9. (Previously Presented) A computer-implemented method for using a computer system to configure a simulation program executable by a computer processor for computing amounts of heat exchanged, comprising the steps of:

composing a heat exchanger which produces refrigeration effect by means of heat exchange between refrigerant and air, by combining individual cells in a cell class;
combining a tube class and fin class into the cell class as categories among which models that represent phenomena occurring in the cells are independent of one another;
defining a refrigerant class for a working fluid which interacts with the tube class;
defining an air class for a working fluid which interacts with the fin class;
defining an abstract class by extracting characteristics common to a plurality of similar parts contained in each of the tube class and fin class if such parts exists;
defining, under each abstract class, as many subclasses which inherit characteristics of the abstract class as there are necessary types of parts to be distinguished;
implementing a phenomenological model of each defined class; and

creating a computer-implemented simulation program executable by the computer processor in an object-oriented language based on the classes.

10. (Currently Amended) A storage medium containing a simulation program which makes a computer implement the functions described in any of claims 8 or 9 [[6 – 9]].